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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/719,517	11/21/2003	Steven R. Sedlmayr	AUO1014	3373

7590 12/22/2004

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EXAMINER	
FINEMAN, LEE A	
ART UNIT	PAPER NUMBER
2872	

DATE MAILED: 12/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/719,517	SEDLMAYR, STEVEN R.	
	Examiner	Art Unit	
	Lee Fineman	2872	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 October 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *132* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *132* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *21 November 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *10/12/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

This Office Action is in response to an amendment filed 12 October 2004 in which claim 132 was amended. Claim 132 is pending.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claim 132 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nicolas et al., U.S. Patent No. 5,299,036 in view of Miyatake el al., U.S. Patent No. 4,943,154 and of Konno et al., U.S. Patent No 4,497,015.

Nicolas et al. disclose a projection apparatus (fig. 4) comprising: [a] means (2a) for producing a primary beam of light having a predetermined range of wavelengths and randomly changing orientations of a chosen component of electric field vectors; [b] means (CSC) for separating the primary beam of light into three primary color beams of light (b, r, v), each of the primary color beams having the same selected predetermined orientation of a chosen component of electric field vectors as that of the other primary color beams (GP, from ESE); [c] three means (5) for altering the selected predetermined orientation of the chosen component of the electric field vectors of a plurality of portions of each of the separate primary color beams of light by passing the plurality of portions of each of the separate primary color beams of light through a respective one of the altering means whereby the selected predetermined orientation of the

chosen component of the electric field vectors of the plurality of portions of each of the separate primary color beams of light is altered in response to a stimulus means by applying a signal means to the stimulus means in a predetermined manner as the plurality of portions of each of the separate primary color beams of light passes through the respective one of the means for altering the selected predetermined orientation of the chosen component of the electric field vectors (column 5, lines 50-56); [d] means (CSC1) for combining the altered separate primary color beams of light into a single collinear beam of light without substantially changing the altered selected predetermined orientation of the chosen component of the electric field vectors of the plurality of portions of each of the separate beams of light by dichroic reflection surfaces intersecting in X-letter form (fig. 4); [e] means (A) for resolving from the single collinear beam of light a first resolved beam of light having substantially a first selected predetermined orientation of a chosen component of electric field vectors and a second resolved beam of light having substantially a second selected predetermined orientation of a chosen component of electric field vectors, whereby the first and second selected predetermined orientation of the chosen component of the electric field vectors are different from one another (column 5, lines 57-61); [f] means (LP) for passing at least one of the resolved beams from the single collinear beam of light to a projection means (EP). Nicolas et al. discloses the claimed invention except for the primary beam being a substantially uniform flux intensity substantially across the initial beam of light and a rectangular cross sectional area and not explicitly stating [g] a driving circuit for driving each of the three altering means according to the signal means; wherein the color separating means comprises a first flat-plate type dichroic mirror and a second flat-plate type dichroic mirror intersecting in X-letter form, light paths from the intersecting part to each of the

altering means having lengths such that the path of the color light which advances straightly through the color separating means is the shortest, the second dichroic mirror being constructed by two dichroic mirrors separated at the intersecting part so that the dichroic reflecting surfaces of the two dichroic mirrors are placed on different planes to allow two-edge surfaces of the two dichroic mirrors forming the intersecting part to be seen as being at least partially overlapping when the color-separating means is observed from the output light side in a direction along its input light. Miyatake et al. teaches a projection apparatus (fig. 1) with a driving circuit (67) for driving each of the three altering means (61, 62, 63) according to the signal means (Y) and wherein the color separating means (58) comprises a first flat-plate type dichroic mirror and a second flat-plate type dichroic mirror intersecting in X-letter form, light paths from the intersecting part to each of the altering means having lengths such that the path of the color light which advances straightly through the color separating means is the shortest, the second dichroic mirror being constructed by two dichroic mirrors separated at the intersecting part so that the dichroic reflecting surfaces of the two dichroic mirrors are placed on mutually different planes to allow two-edge surfaces of the two dichroic mirrors forming the intersecting part to be seen as being at least partially overlapping when the color-separating means is observed from the output light side in a direction along its input light (fig. 1 and column 1, lines 38-50). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the driving means and color separating means of Miyatake et al. in the system of Nicolas et al. as they are commonly available and easy to obtain. Konno et al. disclose a light illumination device (fig, 5) which produces a primary beam (at M) which has a substantially uniform flux intensity substantially across the initial beam of light (column 5, lines 43-52) and has a rectangular cross

sectional area (using lens element 102, fig. 3; column 3, lines 5-8). It would have been obvious to one of ordinary skill in the art at the time the invention was made to replace the light source of Nicolas et al. with that of Konno et al. to have a more uniform intensity light beam and provide a more consistent image.

Response to Arguments

3. Applicant's arguments filed 12 October 2004 have been fully considered but they are not persuasive.

In response to applicant's argument that Konno et al. is nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, the particular problem with which the applicant was concerned is illuminating a liquid crystal device with a uniform flux light source to display an image. Konno et al. clearly provides a light illumination device with uniform flux/intensity for providing illumination of an object (see abstract and field of the invention). Although Konno et al. further state in the field of the invention that the present invention relates "**more particularly** to a light illumination system suitable for use in an exposure device for fabricating semiconductor devices such as ICs" it is not limited to use only in those devices.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the

teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Konno et al. teaches a light illumination device with uniform flux for providing illumination of an object. Clearly replacing a light source (of Nicholas) with a more efficient one (Konno) that provides a more uniform light intensity on the object is knowledge generally available to one of ordinary skill in the art and an appropriate motivation.

The applicant also argues that the references cannot be combined and further would have no reason to combine because Konno teaches away from the combination and would render the prior art invention being modified unsatisfactory for its intended purpose. Applicant states that because Konno discloses an optical system for producing reduced images and Nicolas and Miyatake disclose optical systems for producing enlarged images, the combination is not appropriate and in fact teach away from each other. The examiner respectfully disagrees. The combination is directed to the light source of each optical system not the optics for displaying/projecting the image. Nicolas, Miyatake and Konno all have light sources that provide collimated white light to the optics of the system, which in turn will reduce or enlarge the light beam as required. Again, it is clearly appropriate and within the knowledge of one of ordinary skill in the art to replace the light source of Nicolas with a more efficient one (Konno) to provide a more uniform light intensity on an object.

Conclusion

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lee Fineman whose telephone number is (571) 272-2313. The examiner can normally be reached on Monday - Friday 7:30 - 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew Dunn can be reached on (571) 272-2312. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LAF
November 30, 2004

MARK A. ROBINSON
PRIMARY EXAMINER